



C3J-A

C3J-A/5684

XENON THYRATRON

NEGATIVE-CONTROL TRIODE TYPE

GENERAL DATA

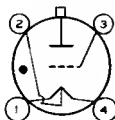
Electrical:

Filament, Coated and Mid-tapped:	Min.	Av.	Max.	
Voltage between pins 1 and 4	2.4	2.5	2.6	ac or dc volts
Current at 2.5 volts.	7	9	11	amp
Minimum heating time prior to tube conduction				30 sec
Direct Interelectrode Capacitances (Approx.):				
Grid to anode				2 μ f
Grid to cathode				14 μ f
Maximum Deionization Time				1000 μ sec
Maximum Critical Grid Current				10 μ amp
Anode Voltage Drop:				
Average, at beginning of life				10 volts
Maximum, at end of life				14 volts
Maximum Commutation Factor*, averaged over first 350 volts of inverse anode voltage rise.				
				0.66 va/ μ s ²
Grid Control Ratio (Approx.):				
For conditions: 10000-ohm grid resistor, circuit returns to filament mid-tap, dc anode voltage, and dc grid voltage.				200

Mechanical:

Mounting Position	Any
Maximum Overall Length.	6"
Maximum Diameter.	1-9/16"
Weight (Approx.).	3 oz
Cap.	Medium (JETEC No.C1-5)
Bulb.	T-12
Base.	Medium-Metal-Shell Small 4-Pin with Bayonet (JETEC No.A4-89)
Basing Designation for BOTTOM VIEW.	4CF

Pin 1 - Filament
Pin 2 - Filament
Mid-Tap &
Circuit
Returns



Pin 3 - Grid
Pin 4 - Filament
Cap - Anode

GRID-CONTROLLED RECTIFIER SERVICE

Maximum Ratings, Absolute Values:

PEAK ANODE VOLTAGE:

Forward	1000 max. volts
Inverse	1250 max. volts

- * defined as the product of the rate of current decay in amperes per microsecond just before conduction ceases and the rate of inverse voltage rise in volts per microsecond following current conduction.



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GRID VOLTAGE:

Peak, before tube conduction -100 max. volts

ANODE CURRENT:

Peak 30 max. amp

Average 2.5 max. amp

Overload:

Rating I*, for duration of. . . .	0.37 sec. . .	30 max.	amp
	0.50 sec. . .	22.5 max.	amp
	1 sec. . .	11.25 max.	amp
	2 sec. . .	5.63 max.	amp
	3 sec. . .	3.75 max.	amp
Rating II**, for duration of. . . .	4 sec. . .	2.82 max.	amp
	3 sec. . .	3.75 max.	amp
	4 sec. . .	3.40 max.	amp
	4.5 sec. . .	3.30 max.	amp

Fault, for duration of 0.1 second

maximum 300 max. amp

AMBIENT-TEMPERATURE RANGE. -55 to +75 °C

• Averaged over any period of 4.5 seconds.

* Averaged over duration of overload occurring no more than once in any period of 4.5 seconds.

** Averaged over duration of overload occurring no more than once in any period of 30 seconds.

OPERATING CONSIDERATIONS

Circuit returns should be connected to filament mid-tap (pin 2).

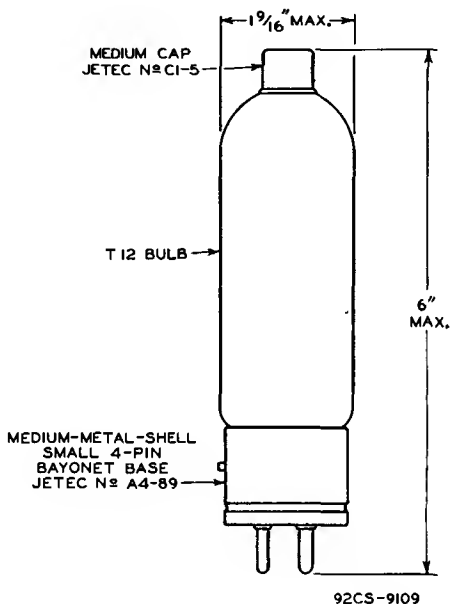
The *anode* of the C3J-A/5684 may show a red color when the tube is operated at full load.

Sufficient *anode-circuit resistance*, including the tube load, must be used under any conditions of operation to prevent exceeding the current ratings of the tube.



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OPERATIONAL RANGE OF CRITICAL GRID VOLTAGE

RANGE IS FOR CONDITIONS WHERE:

$E_f = 2.5 \text{ VOLTS} \pm 5\%$; CIRCUIT RETURNS AND PIN 2 CONNECTED TO FILAMENT TRANSFORMER CENTER-TAP.

THE RANGE INCLUDES INITIAL AND LIFE VARIATIONS OF INDIVIDUAL TUBES.

GRID RESISTOR = 0 TO 10000 OHMS.

AMBIENT-TEMPERATURE RANGE = -55 TO 75°C .

